

## **REMARKS**

In response to the above-identified Office Action, Applicant traverses the Examiner's rejection to the claims and seeks reconsideration thereof. Claims 1-15 are now pending in the present application. In this response, Claims, 3, 8, 12 and 13 have been amended, no claims have been added and Claims 1, 2 and 14 have been cancelled.

### **Amendments to the Claims**

Applicant respectfully submits, Claims 3, 8 and 12 have been amended to delete the recitation of "mechanism" after "valve" for purposes of consistency. Dependent Claim 13 has been amended to clarify the relationship between the recited "calibration surface" and "means of calculating a flow rate" and the elements recited in Claim 1. Support for the amendment to Claim 13 is found, for example, on page 2, lines 19-21, page 3, lines 7-9 and at the top of page 4. Applicant respectfully requests entry of the amendments to Claims 3, 8, 12 and 13 because the amendments are supported by the specification and do not add new matter.

### **Objections to the Specification**

In the outstanding Office Action, the Examiner suggests Applicant add section headings to the specification and further determines the title of the invention is not descriptive. Applicant respectfully submits the attached Amendments to the Specification in which the applicable section headings suggested by the Examiner have been added to the specification and the title of the invention has been amended. The

specification has been further amended to include the reference numerals included in the attached proposed drawing amendment, which will be discussed more fully below. Lastly, Applicant has deleted the wording “mechanism” from the specification to clarify that “valve mechanism” and “valve” refers to the same element. In view of the foregoing, Applicant respectfully requests withdrawal of the Examiner’s objections to the specification.

### **Drawing Objections**

In the outstanding Office Action, the Examiner objects to the drawings under 37 CFR 1.83(a) on the basis that the drawings fail to show every feature of the invention specified in the claims. Applicant respectfully submits herewith a proposed drawing amendment in which the elements specified in the claims are clearly indicated in the drawing. Specifically, the valve housing 10, optimal placement of tappings 14, valve 16 and flow measuring means 12 are clearly illustrated in the proposed drawing amendment. Applicant further submits the attached Amendments to the Specification in which the specification has been amended to include the reference numerals featured in the proposed drawing amendment. Applicant respectfully requests approval of the proposed drawings and withdrawal of the objection to the drawings.

### **Claim Rejections – 35 U.S.C. §112, second paragraph**

In the outstanding Office Action, the Examiner rejects Claims 1-15 under 35 U.S.C. §112, second paragraph. Specifically, the Examiner rejects Claims 1-15 for

omitting essential structural cooperative relationships and Claims 3-15 for failing to particularly point out the subject matter regarded as the invention.

In regard to Claims 1-15, Applicant respectfully notes Claims 1, 2 and 14 have been cancelled. In regard to Claims 3-13 and 15, Applicant respectfully submits Claims 3-13 and 15 are means-plus-function claims therefore the specification is used to ascertain the structure and embodiments for performing the functions recited in the claims. Applicant respectfully submits, the specification sufficiently describes the elements and structural relationships between the elements recited in the claims. For example, the Examiner objects to the recitation of "optimal tapping locations" in the claims. Applicant respectfully submits, however, on page 2, paragraph 5 of the specification, the structural relationship of this element to the valve is discussed. Specifically, the "optimal tapping locations" are described as markings on the valve housing such as "screw threaded holes on the valve housing, provision of a removable plug at each optimal tapping location, or provision of a suitably positioned valve or valves which in turn may be capable of accepting a push fit connector." See Application, pages 2 and 3. With respect to the Examiner's objection to the recitation of "calibration surface means" in the claims, Applicant respectfully submits this element refers to data used to facilitate accurate flow measurements and therefore does not necessarily have any particular structure. See, for example, the reference to the "calibration surface" and "calibration data" provided at the top of page 4 of the Application. Lastly, the Examiner objects to the recitation of "an element" in Claim 13 thus Applicant has deleted "an element" from Claim 13 in the attached Amendments to

the Claims to clarify the relationship between the recited “calibration surface or a means of calculating a flow rate” and the elements recited in Claim 3. For the foregoing reasons, Applicant respectfully requests withdrawal of the rejection under 35 U.S.C. §112, second paragraph.

#### **Claim Rejections – 35 U.S.C. §102(b)**

In the outstanding Office Action, Claims 1-3, 9-11 and 13-15 are rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,967,176 issued to Blann et. al. (“Blann”).

It is axiomatic that to anticipate a claim, every element of the claim must be disclosed within a single reference. *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Furthermore, the reference must disclose the identical invention in as complete detail as is found in the claim. *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

The present invention claims an apparatus for converting a valve means for use as a flow meter for fluid, comprising, a valve housing, a valve of said valve housing, means for providing information relating to optimal placement for differential pressure measurement across the valve housing, means adapted to provide current position of said valve, and means adapted to calculate flow rate from said measured differential pressure means and said valve position information means.

In regard to independent Claim 3, Applicant respectfully submits Blann fails to teach or suggest an apparatus for converting a valve means for use as a flow meter for

fluid comprising at least the elements of a means for providing information relating to optimal placement for differential pressure measurement across the valve housing, means adapted to provide current position of said valve and means adapted to calculate flow rate from said measured differential pressure means and said valve position information means. The only feature of the elements recited above discussed by the Examiner in the Action is the measured differential pressure. Specifically, the Examiner states that elements 57 and 58 of Blann disclose “differential pressure means for measuring the pressures across the restriction.” Applicant respectfully submits, however, the Examiner mischaracterizes Applicant’s recitation of differential pressure measurement in Claim 3. Claim 3 recites a “means for providing information relating to optimal placement for differential pressure measurement across the valve housing” (emphasis added), not merely the measurement of the differential pressure therefore this is not the same element. Thus, the Examiner fails to particularly point out where within Blann all of the above-referenced elements are taught and Applicant has been unable to discern such teachings. Moreover, Applicant respectfully submits it appears in Blann, the sensor plate 54, referenced by the Examiner, is being used as the flow meter, not the valve 12. Accordingly, since Blann does not disclose all the elements of Claim 3, anticipation may not be found. For the foregoing reasons, Applicant respectfully traverses the Examiner’s rejection of Claim 3 and requests withdrawal of the rejection of Claim 3 under 35 U.S.C. §102(b).

In regard to dependent Claims 4-13 and 15, Applicant respectfully submits these

claims depend from Claim 3 and incorporate the limitations thereof. For the reasons discussed above with respect to Claim 3, Blann does not teach or suggest an apparatus for converting a valve means for use as a flow meter for fluid comprising at least the elements of a means for providing information relating to optimal placement for differential pressure measurement across the valve housing, means adapted to provide current position of said valve and means adapted to calculate flow rate from said measured differential pressure means and said valve position information means. Accordingly, since Blann does not teach or suggest all the elements of Claims 4-13 and 15, anticipation may not be found. For the foregoing reasons, Applicant respectfully requests withdrawal of the rejection of Claims 4-13 and 15 under 35 U.S.C. §102(b).

#### **Claim Rejections – 35 U.S.C. §103(a)**

In the outstanding Office Action, Claims 4-8 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blann.

To render a claim obvious, the relied upon references must disclose every limitation of the claim such that the invention as a whole would have been obvious at the time the invention was made to one skilled in the art. MPEP §2143. Furthermore, there must be a showing of suggestion or motivation to modify or combine the teachings of those references. *In re Rouffet*, 149 F.3d 1350, 1357, 47 USPQ2d 1453, 1457-58 (Fed. Cir. 1998). Hindsight must be avoided and instead a conclusion of obviousness must be based on the facts found in the prior art. *In re McLaughlin*, 443 F.2d 1392, 1395, 170 USPQ 209, 212 (CCPA 1971).

In determining Claims 4-8 and 12 are obvious over Blann, the Examiner relies on the previous characterization of Blann however concedes that Blann does not teach the elements of positioning of pressure ports and removable plugs. The Examiner instead determines it would have been obvious to a person having ordinary skill in the art at the time the invention was made to provide the ports with plugs since plugs would be required in case the pressure measuring means are to be removed from the valve means.

Applicant respectfully submits, Claims 4-8 and 12 are dependent upon Claim 3 and incorporates the limitations thereof. As previously discussed, Blann fails to teach or suggest an apparatus for converting a valve means for use as a flow meter for fluid comprising at least the elements of a means for providing information relating to optimal placement for differential pressure measurement across the valve housing, means adapted to provide current position of said valve and means adapted to calculate flow rate from said measured differential pressure means and said valve position information means. Thus, for at least the reasons discussed above with respect to Claim 3, Claims 4-8 and 12 are not obvious over Blann.

Moreover, the Examiner has not provided a sufficient motivation to modify Blann to include the element of positioning pressure ports and removable plugs. The Examiner concedes these elements are not taught by Blann and instead finds they “would be required” and therefore it would have been obvious to one of ordinary skill in the art to include them. As the Examiner is no doubt aware, where the references do not suggest the claimed invention, the Examiner has the burden of presenting a

convincing line of reasoning as to why the artisan would have found the claimed invention to be obvious based upon the cited references. *Ex parte Clapp*, 227 USPQ 972, 973 (Bd. Pat. App. & Inter. 1985). In stating that the combination would have been obvious to the skilled artisan “to provide the ports with plugs since plugs would be required” the Examiner has not satisfied this burden. The Examiner has not shown where within Blann the desirability of “ports” with “plugs...in case the pressure measuring means are to be removed from the valve means” is suggested. Thus, it is only upon viewing Applicant’s disclosure that the incorporation of these Elements into Blann would be recognized by one of ordinary skill in the art. As the Examiner is no doubt aware, such hindsight reconstruction is inappropriate. Thus, for the foregoing reasons the Examiner’s reliance on Blann in rendering Claims 4-8 and 12 obvious is inappropriate. Applicant therefore respectfully requests withdrawal of the rejection of Claims 4-8 and 12 under 35 U.S.C. §103(a).

### CONCLUSION

In view of the foregoing, it is believed that all claims now pending, namely Claims 1-15, are now in condition for allowance and such action is earnestly solicited at the earliest possible date. If there are any additional fees due in connection with the filing of this response, please charge those fees to our Deposit Account No. 02-2666. Questions regarding this matter should be directed to the undersigned at (310) 207-3800.